

Wairarapa Moana NEWS

Winter
2015

Tena koutou tena koutou katoa to the second edition of the Wairarapa Moana News.

In this edition the focus is on the drains, wetlands and our first kakāhi count within the Wairarapa Moana environment.

Did you know that there are at least 1300 kilometres of drains within the immediate catchment? Drains can be seen as long wetlands with a complex set of native and exotic flora and fauna contributing to the wide ranging values of this environment.

Many projects within the Ministry for Environment's Fresh Start for Fresh Water Clean-up Fund have been completed including riparian plantings, and works to avoid direct runoff into drains. Read more about the Kaiwawai constructed wetland project overleaf.

In addition the Wairarapa Moana Co-ordinating Committee has focussed on the management issues associated with wetlands and drains in the draft Natural Resources Plan of Greater Wellington Regional Council.

To all those involved in Wairarapa Moana thank you for your many and varied contributions.

Ian Gunn- Wairarapa Moana Project Director



Students get stuck in

Pirinoa School students and community volunteers did a great job at the South Wairarapa Biodiversity Group Whangaimoana Beach clean-up earlier this year, filling twenty-four sacks with rubbish from the shoreline and dunes.

The event was timed to coincide with the end of the nesting season for pairs of vulnerable banded dotterel that have made the beach home in recent years. The dotterels lay eggs in a small scrape in the sand putting them at risk from vehicles, dogs and human feet.

"We collected a range of rubbish, plenty of bottles, cans and plastic bags, but also a surprising number of tyres and some building materials," said

Biodiversity Officer Toni de Lautour.

"We found heaps of fishing line and hooks knotted round weed, and the children spotted a seagull flying away with line tangled round its leg."

"Volunteers were pleased to see lots of skinks and noted the growth of plants since last winter's dune restoration planting."

Wetland Wonders

Wairarapa Moana's 'Wetland Wonder Discovery Day' lived up to its name with around one hundred visitors, old and new learning more about what makes our wetlands so special. Biodiversity advocate, Jan Stephens welcomed visitors, volunteers and VIPs.

Kākahi, native freshwater mussels, were a feature of the day, children waded into the shallows for them and discovered more about this once abundant shellfish. They were excited to get a close-up look at long and short-fin eel as well as smelt, bullies and some other native fish species," says Toni de Lautour, Greater Wellington Regional Council Biodiversity Officer.

"Adults stayed on the shoreline but were equally excited to see the native species, and learn more detail about the kākahi, as well as Wairarapa Moana's geology, birds, plants and pest species."

Visitors heard more about kākahi, from NIWA Scientist, Mark Fenwick, and local geological enthusiast John Rhodes, explained more about the geological setting of Wairarapa Moana.





Kakahi Count

Volunteer kakahi 'collectors' waded in to Lake Wairarapa as the first annual survey into the population health of the species got underway. Nationally numbers of both the 'common' and 'Auckland' species are in decline, both are found in the Wellington Region.

It's important to understand the size of the population but the age of the kakahi is critical. The volume of those in the mid-age range shows whether juveniles are surviving to breed and therefore maintain the population.

Freshwater mussels are found throughout the world, but are largely unfamiliar to New Zealanders. They are generally found partially buried in soft mud, in gently flowing areas of rivers and lakes. They have dark coloured, rounded shells and at 5 years old, or bigger than 38mm, are classed as 'mature'.

Kakahi are an important part of our region's ecosystem for their ability to filter water and as a food source for wading birds. However, their feeding mechanism can become clogged with sediment from the water and they are sensitive to pollution. Their breeding cycle is dependent on other native fish species that host kakahi larvae.

GWRC commissioned a survey in 2012 showing five sites across eight water bodies with kakahi beds with a population weighting towards older specimens. NIWA is establishing a national database and results of this survey will be added. Next year the Kakahi Count will take place on the western edge of Lake Wairarapa.



Quality design

A significant Fresh Start for Fresh Water funded project concluded with a field day on water quality and an on-site tour at Kaiwaiwai Dairy Farm to demonstrate the innovative design and capabilities of this constructed wetland.

It will add significant biodiversity to the farm as well as improving water quality by removing contaminants from farm drainage water.

Earthworks have transformed a traditionally wet 0.75ha of pasture to a wetland. A portion of the flow from a drain to the north of the wetland has been redirected to provide a permanent and controlled constant flow. Aquatic plants including raupo, club rush and native grasses have been planted in the 300mm deep water.

The design is unique in that the area actually comprises three separate wetlands providing a serpentine flow path for water down 6m wide bays. These bays cross back and forth over the area to slow down water flow, maximise residence time and water treatment.

This wetland should provide an efficient system to remove contaminants from drainage water, particularly nitrate, and allow time for any sediment to settle out. After passing through the wetland the treated water will re-join the original drain.

Many of the forty-three Fresh Start for Freshwater projects have been completed with the rest on target for completion before the scheme ends in October 2015.



www.waiwetlands.org.nz

Wairarapa Moana Wetlands Project
Whakaora te repo, ka ora te taonga Wai
Restoring our wetland treasure

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Wairarapa Moana: the first 'born' of planning water in the

Keep up to date on developments at Wairarapa Moana, read reports and news at www.waiwetlands.org.nz.



Field day participants discussed practical, local solutions for nutrient loss at Tahora Farm, converted from sheep, beef and cropping to dairy three years ago by the Vollebregt family.

For field day notes go to: waiwetland.org.nz

NUTRIENT MANAGEMENT BRINGS FINANCIAL REWARDS

The comings and goings of nutrients (nitrogen and phosphorus) were discussed at Oporua Farm using the OVERSEER® nutrient budget tool. The OVERSEER model for Oporua showed that wintering off cows is more effective at reducing nitrate leaching than installing an effluent holding pond.

Nutrient sampling of 35 individual paddocks across Oporua showed that half had high phosphate (P) levels. By avoiding the application of phosphate fertiliser on those paddocks, around \$16,000 could be saved over two years which easily paid back the original \$2000 cost of sampling.

Phosphate commonly enters waterways directly through effluent discharge, loss of soil in surface runoff and through tile and mole drains. Minimising phosphate loss will improve the levels of algal bloom in waterways and drains.

NATIVE FISH AND OUR DRAINAGE NETWORK

Micheal Greer, NIWA, presented findings from Southland and Waikato during a discussion with farmers and drainage contractors at Hillview Farm.

His research showed that fish in drains prefer a diverse environment which allows them to sleep during the day in weed and to hunt for their food at night in open water, retreating into the weed when drains are cleared. Sediment disturbance can create anoxic conditions (lack of oxygen) downstream causing high fish mortality rates. He outlined that when returning fish to drains it is important to release them upstream of any works.

A variety of fish species living in the drains were on show highlighting that the drainage network is an important native fish habitat. This is reinforced by the nearly 3000 species, overwhelmingly native, being returned recently during a cleaning programme on the midreaches of the Whakawiriwiri stream.

The Freshstart work programme is investigating options which allow both the drains to be cleaned and the native fishery to thrive.

Talking it through

Sharing knowledge and discussing ideas face-to-face has been the most successful way of developing a better understanding with farmers about some of the issues facing Wairarapa Moana. Three field days offered the opportunity to discuss nutrient management as well as the impact of drain maintenance on the aquatic life established in Wairarapa Moana's extensive man-made drainage system

LESSONS SHARED

Lakeside farmers and industry representatives discussed reducing nutrient loss from dairy farms during a field day in Kahutara last week.

Dairy NZ's Mark Neal led a discussion on the economic impacts of reduction and his colleague, Logan Bowler, offered practical tips such as utilising liner offcuts to reinforce well used areas and the importance of safety around upgraded effluent storage ponds.

Greater Wellington Regional Council's Paula Pickford detailed the process of gaining consent for effluent management, stressing the importance of involving the GW consents team early on in the planning processes.

Findings from a comprehensive economic modelling study in Southland's Waituna River catchment were presented. The study showed that nutrient reduction levels are dependent on soil type, farm systems, existing leaching rate and stage of development as well as farmer practice and philosophy.



Committee Update

In recent meetings the Wairarapa Moana Co-ordinating Committee has focussed on an application for Ramsar status. Final consultation towards lodging an application is under way and we expect news on this mid-2015. Support for Ramsar status is being sort from the farming community. <http://www.ramsar.org/>

Much thinking has gone into the draft GWRC Natural Resources Plan (NRP). Categorisations of wetlands and drain management have been considered. Discussions have ranged around the definition of wetland, the need to have a restoration and management plan and how upstream land owners might influence the scheduling of wetlands. Following these discussions a decision has been made by GWRC to schedule significant wetlands.

Clarification has also been sought around the draft NRP and requirements on drains and watercourses so that they are treated in a similar manner, drain cleaning methodologies, the wording regarding the returning of stranded fish and the use of certified operators.

John Hancock, as well as Dean Davies from South Wairarapa District Council resigned their positions on the Wairarapa Moana Co-ordinating Committee. John has been replaced by Phil Gurnsey from the Wellington Conservation Board. We thank them for their contribution to the Wairarapa Moana project.



Perfect planting conditions

Nearly 2000 plants were put in on a recently constructed bank at the Wairio Wetlands, Wairarapa Moana last month. It was an amazing effort from organisers Ducks Unlimited and the team of forty volunteers that included students and staff from Kahutara School and Taratahi Agricultural Training Centre as well as staff from Honda Southey. Honda Tree Fund sponsorship of \$2000 helped to buy 580 native plants.

Bittern Wairarapa

Results from the third annual bittern survey at Boggy Pond, Matthews Lagoon and Wairio wetland on the eastern shoreline of Wairarapa Moana showed a promising trend for male bitterns with five birds recorded in the spring of 2012, seven in 2013 and eight in 2014.

The initial baseline survey in 2013 recorded twenty male bittern in the shallow wetlands around the entire Wairarapa Moana. The survey helps gauge the effectiveness of intensive predator control implemented by GWRC in the winter of 2013. This has focused mainly on wild cats and mustelids (ferrets, stoats, weasels) some of which are proven predators of bittern.

Male bittern are very vocal during the spring, making booming calls from the dense raupo vegetation mainly at dawn and dusk to advertise their territories for females. The survey will be repeated in October 2015. The Australasian Bittern, or matuku hurepo, is nationally endangered.



Diary Dates

JUNE
Sun
7

Onoko Spit planting days

WHEN: 10am to early afternoon
WHERE: Kiriwai Lagoon / Onoko Spit, end of Beach Rd, off Western Lake Road.

JUNE
Fri
19

CONTACT: For more information phone Denise or Dougal Mackenzie on (06) 3077749, Denise 027 247 1712, Dougal 027 445 4351

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